

**TOWN OF BARRINGTON  
Professional  
Engineering  
Services**

**Qualifications | 2.1.21**



326992X  
February 1, 2021

Conner MacIver, Town Administrator  
PO Box 660, 333 Calef Highway  
Barrington, NH 03825

**Subject: Statement of Qualifications for Professional Engineering Services**

Dear Conner,

Barrington residents enjoy small-town, living with the benefits often afforded to a much larger community. The town's rural character and proximity to more urban centers is considered an asset to residents. It is important that the Town of Barrington's (Town) engineering consultant provide cost-effective, quality services to enhance public safety and support the maintenance and development of the Town's infrastructure to maintain Barrington as a desirable place to live and raise a family.

Over the past ten years, DuBois & King (D&K) has worked with the Town staff on a variety of projects and has developed an understanding of the Town's needs. We view ourselves as an extension of Town staff and our experience provides us with a thorough knowledge of Town procedures. We are proud that we have been able to meet the sometimes aggressive schedules needed to complete reviews, reports, and inspections. Our goal has been and will continue to be providing timely and quality service.

D&K is pleased to present seven hard copies and an electronic copy on a USB drive of our qualifications for Professional Engineering Services for the Town of Barrington. D&K has a strong interest in continuing to assist Barrington's Planning Board with review services and provide technical assistance to other Town departments. We hope to support the Town's desire to develop a more robust road improvement plan and build upon the previous study we prepared for the Town.

I will continue to serve as Project Manager and be the primary point of contact for the Town. I have over 30 years of municipal engineering experience, I currently serve as Municipal Engineer for Chester, Bow, and Raymond. D&K's review and engineering services will continue to be provided from our Bedford office by me and my supporting staff.

D&K has the experience, availability, and capacity to continue to be a valued consultant partner with Barrington's Planning Board. The firm's multidisciplinary engineering capabilities will provide Barrington with a local technical resource that can support the Town on a wide range of municipal infrastructure projects.

We appreciate your consideration of our qualifications and look forward to the opportunity to continue working with you and other Barrington staff on planning board, infrastructure, and facility projects. Please do not hesitate to contact me at 603.637.1043 or at [jadler@dubois-king.com](mailto:jadler@dubois-king.com).

Sincerely,  
**DuBois & King, Inc.**

Jeff Adler, PE  
Senior Project Manager

## Firm Profile

DuBois & King, founded in 1962, is a multidisciplinary, professional consulting firm that provides planning, engineering, and construction phase services to federal, state, and municipal clients. With offices in Bedford, Laconia, and Keene, New Hampshire, as well as Vermont, Maine, and New York, D&K provides professional services in civil engineering, site development, water resources, survey, water/wastewater engineering, environmental documentation, and mechanical and electrical engineering. The firm employs engineers, planners, designers, surveyors, technicians, environmental and permitting specialists, wetland scientists, and support personnel. Services for this work will continue to be provided primarily from D&K's Bedford office, located less than 40 miles from Barrington. Services for some projects may be provided from other office locations if appropriate.

D&K has provided planning, engineering, and construction phase services to municipalities throughout northern New England for decades. The table below demonstrates the on-call in-house services D&K is able to provide to the Town. Detailed descriptions follow.



Over the past two years, D&K and the Town have begun to discuss updating the 2011 road study and developing a more robust road improvement plan. Options could include collecting data that can be integrated with GIS to facilitate an interactive Pavement Management Plan.

DuBois & King employs several staff who are FAA Part 107 certificated drone pilots. These team members are available to support projects with drone services as needed.

### Civil Site Engineering

- Planning Board Review
- Construction Observation
- Survey (Topo & Boundary)
- Site Evaluation/Planning/Design
- Local/Regional/State Permits
- Stormwater & Drainage Design
- Low Impact Development
- Utilities Design
- Cost Estimates
- Bid Phase Services

### Transportation and Traffic Engineering

- Planning, Studies, Design
- Streets & Highways
- Design per ITE, MUTCD, NHDOT Project Specifications
- Sidewalks
- Pedestrian and Bicycle Paths
- Intersections
- Pavement Evaluation and Design
- Railroad Crossings
- Bridge Design-Historic and Conventional
- Accelerated Bridge Construction
- Corridor Evaluations and Final Design
- Complete Streets
- Safe Routes to Schools
- Traffic Calming
- Traffic Analysis & Studies
- Traffic Counts

### Utilities and Environmental Engineering

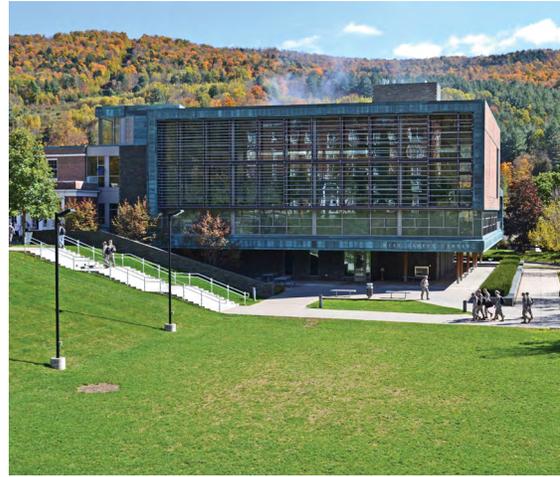
- Third-party sewer review
- Water Source Development
- Water Distribution Mains & Pumping
- Wastewater Collection Mains & Pumping
- Asset Management
- Wastewater Treatment Facilities
- Permitting & Funding Assistance
- Hazardous Materials Investigation, Assessment, & Mitigation

### Environmental Doc. Permitting

- NEPA Documentation
- USEPA Permitting
- Environmental Impact Studies
- Environmental Assessments
- Local, State, Federal Permitting
- Land Development in accordance with NH RSAs
- Wetlands Delineation
- Wetlands Mitigation
- Visual Resource Assessments
- Habitat Identification/Mapping
- Biomonitoring
- National Resource Inventories
- Mapping

### MEP and Facilities Engineering

- Historic Buildings
- Steam & Water Boilers
- Structural Engineering
- Chilled Water Systems
- Air Handling Systems
- Ventilation Systems
- Building Information Modeling (BIM)
- Asset Management
- Code Reviews
- Energy Audits/Energy Conservation
- Sustainable Design
- Commissioning
- Water Conservation
- Process Piping Systems
- Lighting Controls
- Evaluation of Power Supplies
- Grounding & Lightning Protection
- Cogeneration Studies
- Load & Short Circuit Analyses
- Emergency Power Systems
- Power Distribution
- On-Site Generation
- Interior & Exterior Lighting
- Closed Circuit Television
- Security & Access Control
- Fire Alarm Systems
- Arc Flash Analysis



## CIVIL SITE ENGINEERING



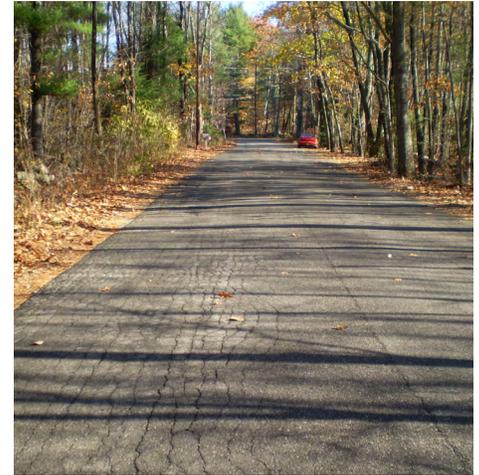
*Site Evaluation/Planning/Design | Local/Regional/State Permits, | Stormwater & Drainage Design | Low Impact Development | Utilities Design | Access Roads | Pathways | Parking Design | Cost Estimates | Bid and Construction Phase Services*

D&K's extensive land development experience assures each client technical expertise in determining project feasibility, suitable site selection, and compliance with regulatory agencies. Firm civil/site engineers are supported by a team of surveyors, landscape architects, wetland scientists, and permitting specialists that provide comprehensive design services for commercial development, institutional and industrial campuses, recreational facilities, and municipal infrastructure projects.

The firm's site design assignments involve land use planning, site selection studies, site and utility engineering, stormwater management, environmental impact studies, traffic analysis, traffic design and engineering, landscape architecture, public engagement, and construction administration.

Continual quality control and constructability reviews are performed during design to ensure that plans and specifications result in quality design products. Planning documents and site designs are developed to be environmentally sound, aesthetically suited to the site, and economically feasible.





## EOR, SUBDIVISION, AND SITE PLAN REVIEW



*Submittal Procedures and Completeness | Applicable Zoning and Land Use Regulations | Applicable Overlay Districts | Applicable Federal and State Regulations, RSAs, and Permits | Site Layout | Roadway Design | Utility Layout and Design | Intersection Safety | Traffic and Parking | Deed/Easement Data | Stormwater Analysis, Design, and Management | Site Grading and Sedimentation/ Erosion Control | Landscape Design | Lighting | Closure Calculations | Structural/Geotechnical Design | Wetlands and Endangered Species | Environmental Impacts*

For plan reviews, D&K typically performs a field inspection of the proposed site; detailed review of soils information with an emphasis on drainage and sewage disposal limitations; detailed review of stormwater drainage and its impact upon adjacent properties; detailed review of roadway design; utility layout and design; review of traffic and parking studies; review of sedimentation and erosion control plan; review for compliance with Town regulations; and preparation of a letter report summarizing our findings.

Review services for planning boards also include:

- Construction Bond Estimating
- Attend Planning Board and other public meetings as required
- Attend TRC meetings

D&K's municipal engineering staff have completed over 300 review projects for municipal planning boards and more than 200 road inspections. Currently, the firm is engaged as the prime consultant for intersection improvement and bridge projects in Bow and road improvement projects in Chester.





## TRANSPORTATION ENGINEERING AND PLANNING



*Scoping | Planning | Design | Evaluation | New Roadways | Reconstruction | Rehabilitation | Complete Streets | Traffic Transportation Alternatives Program | Transit | Abutter Coordination | Signing | Striping | Parking | Streetscape | Lighting Right-of-Way | Pavement Management | Permitting | Cost Estimates | Construction Documents | Bid Phase Services | Safety Improvements*

D&K transportation and traffic engineering teams include planners and engineers experienced with a diverse range of municipal, regional, and state transportation projects. Fully staffed to support transportation projects, our in-house team of qualified professionals offers complete transportation services to guide projects of all sizes from planning through construction administration/inspection services. Our engineers provide a comprehensive understanding of state and federal transportation programs and compliance with the Manual on Uniform Traffic Control Devices (MUTCD), the AASHTO Green Book, and NEPA, USACE, and NHDES regulations and processes.

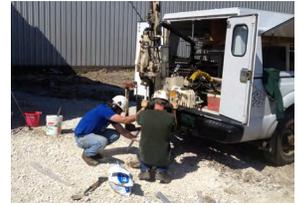
Assignments include roadway realignments and improvements, repair and widening projects, new alignments, bridges, utilities, intersections, traffic calming, and multimodal facilities. D&K has designed approximately 300 miles of roadway for projects in the past 10 years. Fully staffed to support transportation projects, our experienced in-house team consists of highly-qualified professionals from survey through design and construction administration/inspection services. Associated transportation services include assistance in Right-of-Way acquisition, wetlands, railway, and geotechnical engineering, federal and state permits and clearances, and bid and construction phase services.

## UTILITIES AND ENVIRONMENTAL

*Wastewater and Stormwater Collection | Water Distribution Mains and Pumping | Wastewater Collection Mains and Pumping | Permitting and Funding Assistance | Hazardous Materials Investigation, Assessment, and Mitigation*

Water supply and wastewater treatment are the engineering sciences on which DuBois & King was founded. On an ongoing basis since 1962, D&K professionals have planned and designed water distribution and wastewater collection systems. Our engineers provide proactive coordination with regulatory agencies and utilities to obtain permits and approvals.

D&K staff provide services for investigations, assessments, compliance, and monitoring of sites containing hazardous materials and solid waste. The firm's environmental professionals have an in-depth knowledge of federal and state regulations to effectively manage and guide clients through the regulatory process.



## GEOTECHNICAL SERVICES



*Subsurface Investigations | Subsurface Program Design and Analysis | Borehole Logging | Geotechnical Instrumentation Analysis | Groundwater/Seepage Analysis | Slope Stability Analysis | Seismic Analysis | Finite Element Modeling | Rock Anchor Design | Foundation Design | QA/QC*

D&K’s experience in geotechnical engineering corresponds to our diverse experience in civil engineering projects. D&K provides subsurface investigations and geotechnical engineering for embankment repair and stabilization, earth-supported structures (foundations, culverts, bridges, and dams), earth-retaining structures, and roadway reconstruction projects. For nearly 60 years, the firm has been providing engineering and design for projects being constructed in New England’s variable and complex geologic conditions. DuBois & King engineers prepare plans in MicroStation SE CADD and specifications in SpecsIntact for USACE projects. Firm geotechnical professionals have in-depth knowledge of GeoStudio and of gINT Borehole Log software.

## SERVICES FOR PREPARATION OF GRANT APPLICATIONS

*Agency Coordination | Grant Applications | Design Conformance | Reimbursement Management | Grant Close Out*

D&K has relevant experience and is fully capable of providing the requisite funding agency coordination and preparation of grant/loan funding applications and associated documentation for municipal projects. The firm’s team members are experienced at identifying grant alternatives and preparing applications for grant funding. D&K has experience conforming our professional services agreements to the requirements of a variety of state and federal funding agencies.

NEW HAMPSHIRE  
DEPARTMENT OF TRANSPORTATION

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**Local Public Agency Manual for  
the Development of Projects**



FHWA Approved March 20, 2017  
Printed June 2017  
V3.0



# STRUCTURAL ENGINEERING

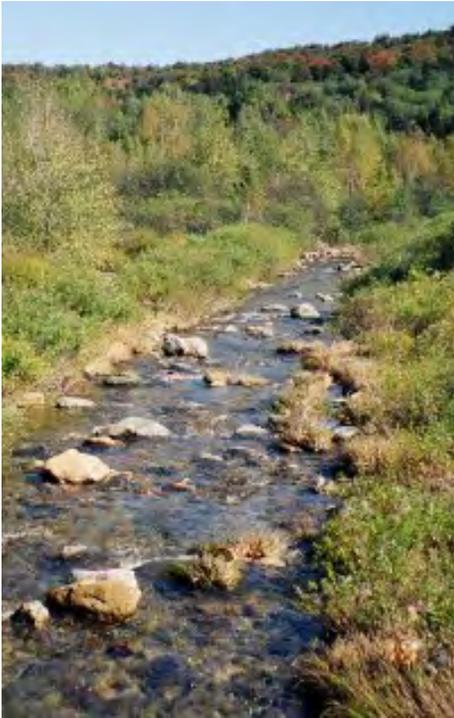


*Bridge Type Studies | Inspections | Load Ratings | Rehabilitations | Replacements | Steel | Concrete | Timber Covered Bridges | Culverts | Geotechnical Engineering | Foundations | Vibration Analysis | Structural Details | Code Analysis | Retaining Walls | Right-of-Way | Parking Structures | Permitting | Highway Approach Design | Cost Estimates | Construction Documents | Bid and Construction Phase Services*

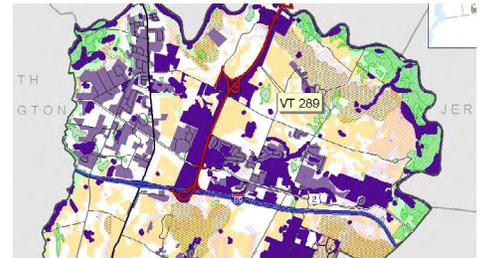
For DOT projects, D&K’s bridge engineers prepare condition assessments, calculate load ratings, and make recommendations for rehabilitations and replacements and perform bridge inspections in accordance with the guidelines outlined in the Federal Highway Administration’s National Bridge Inspection Program and Bridge Inspector’s Training Manual. D&K staff use the latest AASHTO, state design codes and specifications, and principles of Accelerated Bridge Construction. Designs include concrete, steel, and timber bridges; spread footings bearing on soil and directly on ledge; pile foundations; and mechanically stabilized earth (MSE) abutments and retaining walls. The firm’s expertise includes the assessment and repair of historic structures, including timber covered, steel truss, and suspension bridges.

D&K’s structural engineers also provide complete engineering for analysis, design, inspection, and evaluation of structural systems. Senior level expertise includes all standard structural systems and the knowledge and creativity to resolve unique challenges. Our structural team has conducted investigations of existing structural systems and provided structural analysis, design, and detailing assistance for a wide variety of industrial, institutional, and commercial clients.





## SITE EVALUATION, PERMITTING AND WETLANDS



*Federal, State, Local Permitting | Environmental Documentation | Wetland Delineation | Wetland Mitigation Site Design |  
Categorical Exclusion | Environmental Assessment | Environmental Impact Statement | Visual Resource Assessments | Habitat  
Identification/Mapping | Biomonitoring | National Resource Inventories*

DuBois & King's Environmental Services staff are charged with guiding projects through local, state, and federal regulatory documentation, clearances, and permitting. With expertise in documentation, alternative analysis, and resource identification, delineation, and mitigation, D&K staff have provided NEPA, environmental, and permitting services for a variety of assignments including large complex transportation projects. They have provided NEPA documents where the DOD, FHWA, DOE, FAA, and EPA have been the lead agencies, among others.

When supporting a planning and engineering effort or conducting a natural resources investigation independent of a development project, staff engineers, environmental planners, permit specialists, GIS specialists, wetland scientists, field naturalists, surveyors, and landscape architects are highly experienced in providing services for compliance with regulatory agencies.

*Wetland Restoration Plans | Vegetation/Planting Plans | Erosion Control/Stabilization Plans | Compensatory Mitigation | Invasive  
Species Control | Preparation of State-Approved Construction Sequence and Methods | Monitoring | Expert Testimony*

D&K's certified wetland scientists provide the technical expertise to assist owners with restoration plans, revegetation plans, invasive species control plans, erosion control, streambank stabilization, monitoring plans, and guidance on compliance with state wetlands regulations.



## BUILDING SERVICES



*Code Reviews | Facility Assessments/Audits | Sustainable/Net Zero Design | LEED | New Construction and Renovation*

D&K provides professional services related to mechanical, electrical, structural, and civil engineering. The firm’s Building Services Division is a focused group of professionals specializing in providing engineering services related to the assessment and design of building system infrastructure. D&K has a long history of providing engineering services for facilities through on-call agreements for federal and state agencies, including the State of New Hampshire, New Hampshire Army National Guard, State of Vermont, US Postal Service, US Dept. of Veterans Affairs, US Fish & Wildlife, USDA Forest Service, USDA Natural Resources Conservation Service, and the US Army Corps of Engineers, as well as project specific assignments with numerous institutions, industrial clients, and architectural firms. Detailed capabilities for facilities engineering service-areas follow.

## MECHANICAL ENGINEERING

*Energy Audits/Energy Conservation | Commissioning | Water Conservation | Historical Buildings | Heating and Cooling Systems | Steam & Water Boilers | Chilled Water Systems | Air Handling Systems | Ventilation Systems | Process Piping Systems | Plumbing Systems | Solar Domestic Hot Water | Snowmelt Systems*

DuBois & King mechanical engineers specialize in the design of building heating, cooling, ventilation, and plumbing systems. D&K mechanical professionals understand the special considerations and challenges inherent to building systems, including environmental controls, physical limitations imposed by building configurations, process details and code requirements, the safeguard of building occupants and equipment, energy efficiency, and the cost-effectiveness of design alternatives.

Firm professionals are experienced problem solvers who have earned a reputation for being responsive to clients and creative in their approach to the design and upgrade of mechanical and plumbing systems. They balance capital costs with future returns from energy efficient design. Their expertise encompasses new construction, as well as facility renovations and rehabilitation.

Assignments include single discipline through full service multidiscipline design and construction administration. The firm is committed to integrated design of high performance buildings. Staff includes Leadership in Energy & Environmental Design (LEED) Accredited Professionals and ASHRAE Certified Commissioning Process Management Professionals.





# ELECTRICAL ENGINEERING

*Lighting Controls | Evaluation of Power Supplies | Grounding and Lightning Protection | Cogeneration Studies | Load and Short Circuit Analyses | Emergency Power Systems | Power Distribution | On-Site Generation | Telephone/Intercommunications Systems | Interior, Exterior Lighting | Closed Circuit Television | Security and Access Control | Paging and Clock Systems | Fire Alarm Systems | Arc Flash Analysis*

DuBois & King’s electrical engineering staff are experienced project managers, engineers, designers, and technical staff capable of providing comprehensive services necessary for the design of electrical systems for governmental, institutional, commercial, and residential buildings. Firm professionals perform field investigations, evaluations, and system condition assessments needed to design power, lighting, communications, and instrumentation systems. Firm engineers provide studies, computer modeling analyses, bid and construction documents, and cost estimates for a wide range of projects.

D&K electrical engineers work closely with owners, architects, and other professionals to develop assessments, recommendations, and energy efficient designs for new construction and renovation projects. With a focus on thorough assessment of electrical and communication system needs, decades of practical electrical engineering design expertise, and an emphasis on reduction of energy usage, D&K engineers develop electrical infrastructure that contribute to successful building projects.





## SURVEY AND MAPPING

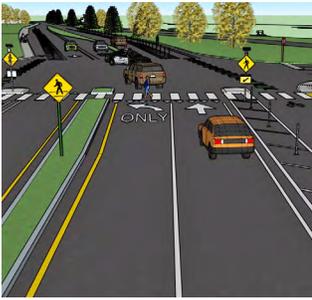
*Horizontal, Vertical Control | Topographic Survey | Boundary Survey | Deed Research | Construction Stakeout | Base Mapping | Plats | Monitoring | Geodetic Leveling | High Accuracy Construction Services | GPS | GIS | Drone Services*

D&K uses the latest technology to achieve greater accuracy and efficiency, which is fully compatible with our in-house and MicroStation/AutoCAD systems. D&K's field personnel are equipped with robotic total station and RTK GPS systems. This equipment supports providing one-man survey crews to projects for increased productivity and budget control.

Survey assignments include construction stake-out, hydrographic survey for flood insurance studies, right-of-way survey, and boundary survey in densely populated areas and in remote locations such as mountainous terrain in National and State Forests. D&K's use of geodetic leveling instruments has set published national benchmarks and provides high-accuracy for construction layout services.

D&K's Survey Department comprises Survey Party Chiefs and technicians who work under the direct supervision of a Licensed Land Surveyor. Survey staff offer expertise in land surveying and mapping projects and topographic, property, and construction survey. They establish horizontal and vertical control, as well as construction baselines and stakeout. Property survey services include deed research and preparation of property plats for filing with local officials.





# LANDSCAPE ARCHITECTURE



*Landscape Master Planning | Landscape Revitalization Design | Conceptual Planning | Site Analysis and Feasibility | Land Use Planning | Design Review and Development | Site Planning and Design | Sustainable Design | Natural Resource Management | Brownfield Redevelopment | Hardscape | Streetscape | Public Facilitation and Outreach | Visual Impact Analysis | Permitting Assistance | Visualization | Code Compliance | Planting Plans | Parks and Open Space | Wayfinding*

D&K provides land planning and design services to enhance the built and natural environment. Through the design process, the physical environment is planned and developed with consideration for context and the natural surroundings. The firm’s landscape architects support a wide range of project types, including planning, transportation, civil/site, water resources, and environmental. Services are provided by licensed professionals with backgrounds in community planning, landscape architecture, and urban design.

D&K’s landscape architecture practice is supplemented by in-house multidisciplinary engineers, environmental specialists, and surveyors to provide in-depth project design services. Projects include community planning, economic revitalization, master plans for new and mixed-use development, urban design, streetscape enhancement, public park and open space design, brownfield redevelopment, trails and greenways, campus planning, recreational design, commercial site design, and roadway and streetscape improvements. Services include visual impact assessments, permitting support, sustainable design, visualization and graphic illustrations, planting plans, wayfinding, landscape lighting, site inventories, and public presentations and engagement.



# HAZARDOUS MATERIALS



*Environmental Site Assessments (ESAs) | Transaction Screening | Water, Air, Soil Monitoring | Underground Storage Tank Closures | Brownfield Redevelopment | Corrective Action Plans | Groundwater Monitoring Wells | Petroleum Site Investigations/Cleanup | Remediation System Design and Operation | Annual Monitoring, Reporting | SPCC Plan Development, Updates | Facility Response Plan (FRP) Development | Tank Inspection | Regulatory Compliance Security/Secondary Containment Site Design | Landfill Closure Design | Post Closure Plans*

D&K staff provide services for investigations, assessments, compliance, and monitoring of sites containing hazardous materials and solid waste. D&K environmental professionals have an in-depth knowledge of federal and state regulations to effectively manage and guide clients through the regulatory process. Our professionals are skilled at performing environmental services ranging from completing a property transaction screen to designing and operating a groundwater remediation system.

D&K staff have investigated and designed remediation for variety of contaminant sources for fuel depots, industrial facilities, maintenance shops and garages, electrical substations, well sites, petroleum storage stations, airport fuel farms, and agricultural facilities. Firm professionals have characterized and managed sites affected by petroleum hydrocarbons, heavy metals, PCBs, and chlorinated solvents.

DuBois & King provides a full complement of environmental services, including soil and groundwater monitoring, site assessment and characterization, preparation of Corrective Action Plans, and redevelopment of contaminated sites.





## CONSTRUCTION PHASE SERVICES



*Contract Administration | Receipt of Bids | Construction Administration | Construction Observation | Change Orders | Submittals | Records Maintenance | Field Directives | Periodic Progress/Budget Reports | Substantial and Final Completion | Cost Estimating | Materials Testing | Grant Administration | NHDOT LPA*

D&K provides construction phase services and observation/resident engineering services for projects designed by the firm and for projects designed by others. As the owner’s representative, D&K provides contract administration and operates as the liaison between the owner and the contractor and to obtain contractor adherence to the project design, schedule, and budget. D&K’s construction observation services include: contractor’s activity observation, field testing of soils, concrete and materials sampling, daily reports, records maintenance, schedule monitoring, assistance in semi-final/final inspections, and punch list preparation. Construction phase services are provided to municipal, federal, state, institutional, and commercial clients for a range of infrastructure improvement projects: road reconstruction, sidewalks, bridges, dams, wastewater facilities, airports, stormwater, site improvements, and construction/expansion/renovation of buildings.

Prior to commencement of construction activities, D&K will arrange a pre-construction meeting. This is a meeting with the contractor, consultant (D&K), and Town staff to define lines of communications and establish points of contact. D&K will establish the key milestones when construction monitoring will occur and will define what construction activities need to be observed. The construction schedule, testing requirements, and approval process will be reviewed and discussed at the pre-construction meeting. During the meeting, D&K will define substantial completion, the completion of punch list items, and final completion and acceptance.

## CONSTRUCTION OBSERVATION SERVICES FOR TOWNS

D&K has developed a construction observation process that is based on site visits at key construction milestones. These key points are minimum monitoring points. Additional visits will occur between the key milestones. Specific projects may require unique or additional monitoring. Construction monitoring reports are prepared documenting each phase of construction activity and providing documentation and updates on construction progress to the Town.

In addition to performing scheduled visits, D&K will periodically perform unscheduled visits. The visits occur primarily during embankment and drainage construction to ensure development is completed in accordance with the approved plans and good construction practices.

The five key milestones for Construction Observations include:

- Clearing & Grubbing
- Embankment Subgrade and Drainage
- Bankrun Gravel
- Crushed Gravel and Binder-Course Pavement—including preparing a project punch list and performing a Construction Bond Reduction analysis
- Wearing-course Pavement and Project Closeout—including a final site visit, review of record drawings, and review of Construction Bond Release

D&K typically performs 10 to 15 site observations of each project, which is largely dependent upon the contractor's schedule and phasing of the project, as well as the volume of earthwork required. Projects that involve large fills will require more compaction tests and more inspection time, as we generally test in no greater than 12" lifts.

As part of our construction services, D&K will submit a summary report of all findings to the Town in association with each of the key milestone activities. Each report will provide the Town with an opinion of the observed activity and copies of any test results associated with that activity. D&K anticipates submitting summary reports of each construction project related to each of the program steps. If the Town feels it is necessary, Field Observation Reports of each site visit can be submitted/included with each summary report.

During construction, design changes may be required. Our approach is to notify the Town and have the developer's engineer revise the plans to document the proposed change. We would review the proposed change with Town staff, and if the change is determined to be minor in nature, an administrative approval from the Town would be obtained. If the change is determined to be major in nature, a formal review and approval by the Town would be necessary.

## Key Staff and Qualifications

Jeff Adler, PE, will continue to serve as Project Manager and the primary point of contact for Barrington. The continuity of our staff is valuable in our ability to successfully and efficiently provide services to small communities. D&K understands that the majority of the anticipated services awarded under this contract will be civil engineering/Engineer of Record (EOR) and plan review services. Based in our Bedford Office, Jeff and Senior Civil Engineers José Lovell, PE, and Ross Tsantoulis, PE, will provide the majority of these services. Over the past several years, Jeff has developed a positive working relationship with Conner MacIver, Marcia Gasses, Barbara Irvine, Marc Moreau, and Suzanne McNeil. As a multidisciplinary, mid-sized engineering firm, D&K has the ability to use in-house staff to provide a full range of services to the Town. Descriptions of D&K's key project team members follow.

**Jeffrey Adler, PE, Project Manager/Senior Civil Engineer**, has 38 years of experience in civil and environmental engineering, providing professional services for municipal, state, and private clients. He is a New Hampshire-licensed professional engineer and has served as the EOR for the Town of Barrington for the past 10 years. Jeff maintains multiple ongoing municipal engineering contracts, some continuously spanning his 33 years with the firm. He has provided planning board review for hundreds of projects as well as multidisciplinary management, including civil/site, structural, electrical, and HVAC improvements. Assignments have involved sidewalk, roadway paving and drainage, lighting, permitting, water

## Added Value for Planning Boards



**Chester:** D&K assisted the Town of Chester with adjusting their zoning regulations. The Town was considering implementing open-space/conservation-type development, but was concerned that new regulations not impede development in the Town. Open space design involves concentrating development in a compact area of a site, leaving the remainder of the site as open space or natural areas. Many communities are incorporating regulations such as these into their zoning requirements and/or master plans.



**Hampstead:** The Town of Hampstead had been plagued with driveway issues for many years prior to hiring D&K as their Town Engineer. One of the first requests the Town made of D&K was to review existing driveway regulations and recommend improvements. D&K compared Hampstead's driveway regulations to surrounding communities (including the communities we serve as Town Engineer); spoke with various Road Agents and Public Works Directors to understand their driveway experiences; and recommended appropriate language to improve and address the Town's concerns.

## Cost-Effective solutions for Municipal Clients



**Roadway Planning for CIPs.** The firm routinely provides on-call services to the public works directors and road agents. For several communities, D&K staff drive the roadways with the road agents in the spring to assist in developing the roadway CIPs for the upcoming year. Typically, reclamation and overlay projects do not require complete design plans, and we assist the departments of public works/road agents in preparing sketch plans/details for construction by municipal crews. On projects that require outside contractors, we assist towns in developing an RFP for advertisement. During construction, we provide assistance as needed to answer questions and resolve issues that may arise.



**Drainage Project Services.** D&K routinely provides assistance to departments of public works/road agents to address drainage issues. These problems can be related to erosion issues, flooding due to undersized storm drainage systems (swales, structures, pipes), or homeowner issues with street runoff. For small flooding issues, we use cost-effective LiDAR and/or GIS mapping to develop mini-hydraulic models to assess and size individual culverts and/or swales to correct the drainage issue. These analyses can typically be completed in only 2 to 4 hours, saving the community several thousand dollars in survey and engineering costs. Similar to the road projects noted above, we have developed sketch plans/details for construction by municipal crews or developed RFPs for outside contractors.

and wastewater, parking, drainage, utilities, and airport design. *Role:* Jeff will serve as the main point of contact and manage D&K's services as well as provide plan review services.

**José Lovell, PE, Senior Civil Engineer,** has 17 years of civil engineering experience, including planning, design, and construction of stormwater management, roadway, site, water distribution and storage, wastewater collection, combined sewer overflow system improvement, and natural gas distribution projects. José also is Vice Chairman of the City of Manchester's Zoning Board. He has been responsible for all aspects of project development, including conceptual, preliminary, and final design, cost estimating, assessment of municipal and private water and wastewater infrastructure, development of contract drawings and specifications, permitting, property easement acquisition, construction administration and resident engineering, development of record drawings, and project startup and closeout services. José is currently supporting the Towns of Raymond, Chester, and Marlborough with construction observation and the Town of Bow with design of a water system expansion. *Role:* José will provide plan review and construction inspection services and manage civil, utility, and transportation projects

**Ross Tsantoulis, PE, LPA, Senior Civil Engineer,** has 13 years of experience providing municipal site, stormwater, utility, water resources engineering and permitting experience throughout New Hampshire. Since joining D&K in 2017, Ross has served in a lead role providing plan review, town engineering, and construction observation for the towns of Barrington, Chester, Bow, and Raymond. He is also an FAA-certificated Part 107 drone pilot. *Role:* Ross will provide plan review and construction inspection services, and is available to support civil and transportation projects.

**Nick Sceggell, PE, LPA, Senior Civil Engineer,** is a site, utility, and environmental engineer with 16 years of experience working with municipal, nonprofit, and commercial clients on a diverse portfolio of design, construction management, and environmental planning projects. Nick supported the Town of Milford in developing an asset management system specific to the Town's needs, an implementation plan based upon needs and available funding, and funding research and coordination at a level suitable for completion of the plan. Nick has provided third-party reviews for significant connections to the City of Laconia's water distribution system; third-party review services to evaluate new wastewater connections to a municipal wastewater collection system; and third-party review of sewer plans for a multi-year multi-phase development serving Plymouth State University. *Role:* Nick will provide plan review and be available to lead and manage utility projects.

**Jon Ashley, PE, Senior Utilities Engineer,** has 28 years of environmental and civil engineering experience. Jon's experience includes planning, management and design of water and sewer projects, hazardous waste and brownfield remediation, road and culvert projects, slope stabilization, stormwater collection and treatment, and site/civil

development projects for municipal, state, local, and private clients. *Role:* Jon will support municipal infrastructure projects as needed.

**Jim Hall, PE, LPA, Senior Bridge Engineer**, manages D&K's bridge engineering group. He has 21 years of experience in inspection, evaluation, design, and construction observation of numerous transportation projects throughout New England. Beginning his career at RIDOT in 1999, Jim's expertise includes the design and rating of a wide range of steel, timber, and concrete bridges, including single and multi-span bridges. Jim has served numerous projects involving the analysis and rehabilitation of historic bridges and developing accelerated bridge construction projects. He has experience with projects administered through the NHDOT Bridge Aid program. *Role:* Jim will lead and manage services needed for bridge projects for the Town.

**Timothy Dall, PE, SE, LEED AP, SECB, Senior Structural Engineer**, is a New Hampshire-licensed professional engineer with 24 years of experience as a structural engineer. He leads the D&K Structures Division. Tim's experience includes design and investigation of various building materials, including steel, concrete, precast concrete plank, masonry, and timber. His project experience includes new building construction, retrofit of existing buildings, pedestrian bridges, and other structures of various materials and degrees of complexity. He is responsible for project management, structural design, and production of contract documents using CADD and Building Information Modeling (BIM) platforms. *Role:* Tim will lead structural support services to address Town buildings and facilities as needed.

**Alan Gould, PE, Senior Electrical Engineer**, is the Director of D&K's Building Services Division. He has 30 years of electrical engineering experience performing and supervising the design of electrical systems for a variety of applications, including commercial, industrial and institutional clients. Alan has performed LEED design from Silver through Platinum along with dozens of PV solar designs. His experience includes commercial electrical design and installation, utility infrastructure design and installation, residential, healthcare, institutional, and industrial electrical installations. Alan has provided building assessment services for numerous municipalities, the City of Lebanon where he has provided services for municipal buildings, a library, recreation center, and airport terminal. *Role:* Alan will lead D&K's MEP services to address Town buildings and facilities as needed.

**Steven Dumas, PE, CxA, BCxP, LEED AP, Senior Mechanical Engineer**, is a mechanical engineer with 38 years of experience in project management, design, and construction administration services for mechanical engineering projects, ranging from facilities evaluations to complex multidisciplinary design packages for multimillion-dollar projects. He has specific experience with life cycle cost and ROI analysis, energy conservation evaluations, and system controls designed to provide energy saving operations for both existing and new systems. Steve has provided services for institutional, industrial, government, commercial, and healthcare sectors. Steve provides commissioning services to a wide variety of clients and facilities primarily focusing on HVAC and specialty ventilation systems and beginning with Owner Project Requirements (OPR) development and through post occupancy operational verification. Steve was a Senior Mechanical Engineer for D&K's assessment of 44 New Hampshire Army National Guard facilities. *Role:* Steve will support D&K's MEP services to address Town buildings and facilities as needed.

**Charlotte Brodie, CWS, New Hampshire-Certified Wetland Scientist**, is an interdisciplinary field scientist trained in environmental evaluation, interpretation, and monitoring. As a naturalist, she integrates information on the biotic and abiotic components of ecosystems for site descriptions, inventories, criterion-based evaluations, and impact evaluations. Her training and experience incorporate geology and geomorphology, soils chemistry, botany, vertebrate and invertebrate zoology, and hydrology. She specializes in wetlands analysis and has a thorough knowledge of state and federal regulations pertaining to wetlands and other waters of the United States. The quality of her work has been recognized by the US Environmental Protection Agency, which requested her services for a northwestern Vermont project aimed at early identification and protection of wetlands in areas subject to heavy development pressure. Charlotte completed Town-wide Wetland Function Evaluation and Mapping in Raymond, NH, including completing a report and GIS assets to enhance the town's ability to develop zoning regulations that promote groundwater quality. *Role:* Charlotte will support wetland delineation and environmental permitting services for Town projects.

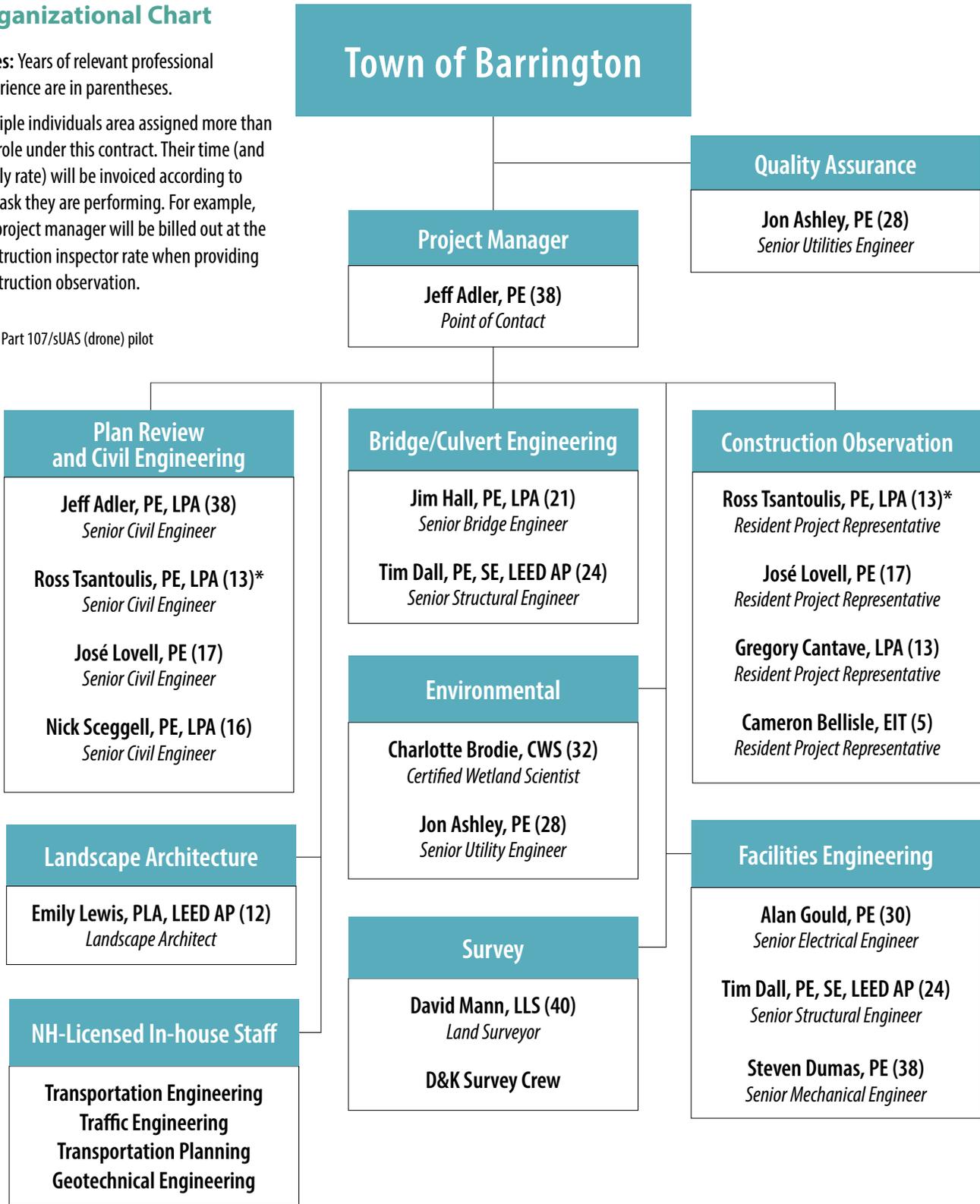
Resumes for the above individuals are appended to this document. A project organizational chart follows.

## Organizational Chart

**Notes:** Years of relevant professional experience are in parentheses.

Multiple individuals are assigned more than one role under this contract. Their time (and hourly rate) will be invoiced according to the task they are performing. For example, the project manager will be billed out at the construction inspector rate when providing construction observation.

\* FAA Part 107/sUAS (drone) pilot



## Project Experience

### Town Engineer Services

DuBois & King has served the Town of Barrington as Engineer of Record for the past 10 years. In our role as EOR, we consider ourselves an extension of Barrington's staff, assisting the Planning Board with subdivision/site plan reviews and construction inspection services and providing services to other Town departments. D&K has been thorough and timely in our reviews/inspections and have provided review services within or below our budget estimates.

Other services provided to the Town have included assistance to the Selectboard in the preparation of a Town-Wide Road Evaluation Study. The study fostered public support of the annual town highway budget, and D&K has provided continuing assistance to the road agent to implement the study. D&K completed a site plan for Barrington's Highway Garage and prepared a proposal for a site plan design for a new Town Office. We also assisted the Town in obtaining a waiver from EPA in relation to the Town's classification as an MS4 community. Obtaining the waiver saved the Town from having to file detailed and costly reports and documents associated with an MS4 classification.

As Barrington's EOR, D&K will continue to function as an extension of Town staff, working on behalf of and for the benefit of the Town.

### Representative Experience

The following pages offer summaries of recent, relevant Town Engineer tasks performed by the DuBois & King team.

## Technical Assistance



D&K understands that communities like Barrington often have limited staff and funds to manage and review new development projects while providing the services required to maintain existing infrastructure. As an engineering consultant, D&K can supplement the Town's resources by providing technical assistance as needed to support Town boards, departments, and committees in managing new developments and current infrastructure. By providing a proper review of a site plan, subdivision, conservation, or other application to the Town, D&K can help the Town avoid potential future issues. For example, improper drainage design for a new development can result in an icing situation on Town-maintained roads during the winter season, costing the Town additional resources to maintain and repair the roads.



D&K has experience working with zoning and planning boards on a wide spectrum of review requests. Our team has worked with communities like Chester and Raymond to complete comprehensive reviews that include zoning ordinances, development regulations, and general good engineering practices. We have worked with communities like Bow which has requested specific reviews to stormwater management analysis, traffic analysis, utility and roadway design, and/or erosion control.

# BARRINGTON, NH

333 Calef Highway, Barrington, New Hampshire 03825

Years Served: 2011–Present



<b>Planning Board Review</b>	D&K reviews private development subdivision and site plans for compliance with local, state, and federal regulations as well as scheduled and unscheduled construction observation for these projects.
<b>Annual Road Improvement Construction Observation (2011 through 2020)</b>	D&K assisted with the observation, recording, and reporting of annual roadway improvement projects. The scope of work included observing the Contractor's construction means and methods for roadway reclamation, overlay, milling, drainage improvements, signage installation, shop drawing review correspondence, and review of material sieve, proctor, and compaction test results.
<b>Pavement Evaluation and Roadway Inventory</b>	Working closely with Barrington Road Agent, D&K inventoried (roadway name, length, width, surface, signage, etc.) and evaluated roadway, pavement, drainage, and guardrail conditions based upon methodology developed by the Asphalt Institute. Upon completing field observations, the D&K team ranked roadways in order of condition and importance to prioritize roads to first maintain good roads and then invest in poor roads. D&K reviewed geotechnical core samples and analyzed the cores to provide maintenance and improvement treatment recommendations. D&K then submitted an engineering report to the Town to summarize the field observations and recommended a repair strategy schedule and financial budget for the Town's future road maintenance. The Town has approximately 67 miles of paved and 13 miles of unpaved roads.
<b>Route 125 and Route 9 Intersection Traffic Analysis</b>	D&K performed a traffic analysis of impacts from a convenience store/gas station development proposed for an already congested, busy intersection in the center of Town. D&K is currently working with the applicant and Planning Board to mitigate impacts and safety concerns potentially resulting from the development.
<b>60-lot Open Space Development Traffic Analysis</b>	D&K performed a review of traffic impacts from a proposed 60-lot open space development on abutting intersections and local roads along Route 125.
<b>Public Works Garage</b>	D&K assisted the Town with sketch plans for the layout of a new public works garage for vehicle maintenance and storage, and in the preparation of an RFP for bidding.
<b>Town Office Site Feasibility and Design</b>	D&K initially assisted the Town in the site feasibility of various locations within the Town to locate the best site for the new Town office. D&K performed civil/site design services for the new facility, and worked jointly with Town Administrator, architect, and Town staff to provide alternative layouts to meet the desired needs of the Town.
<b>Barrington Road Improvement Plan</b>	During the past two years, D&K and Town staff have had conversations regarding updating the road study that D&K performed in 2011. One of the options we discussed was using a vendor to collect roadway data using an advanced mobile sensing vehicle. This data collected by the vehicle can be downloaded into a pavement monitoring program which includes a Pavement Condition Index (PCI) Report integrated into a GIS system. Using the GIS system would facilitate the development of a Pavement Management Plan which could assist with budgeting for repairs and make suggestions for maintenance that are based on actual pavement conditions and current budgetary constraints. Data can easily be updated yearly and maintenance scenarios can be reevaluated based on changes in the Town's budget. D&K looks forward to continuing these discussions with Town staff to assist with the development of a road improvement plan and a pavement maintenance system that meets the Town's needs.

## BOW, NH

10 Grandview Road, Bow, New Hampshire 03304

Years Served: 2012–Present



### Planning Board Review

D&K reviews private development subdivision and site plans for compliance with local, state, and federal regulations as well as scheduled and unscheduled construction observation for these projects.

### Intersection Improvements

The NH 3A and Dunklee Road intersection serves an expanding commercial/industrial area and presents a challenge for vehicles entering NH 3A from Dunklee Road given the high level of traffic on NH 3A. Large trucks have difficulty turning right onto NH 3A from Dunklee Road and currently cross the centerline of the road during this maneuver. D&K completed a study of the intersection and is designing a signalized intersection with added turning lanes. D&K provided survey, wetland delineation, right of way, land acquisition, traffic analysis, signal design, preliminary and final design, environmental documentation, cost estimating, preparation of bid documents, and construction phase services.

### Birchdale Road Bridge

D&K provided study, design and construction phase services for replacement and widening options of an existing 13' wide metal plate pipe arch bridge under the NHDOT Municipal Bridge Aid Program. D&K evaluated the existing structure (which had failed) and coordinated with NHDHR, NHDES, and USACE regulators, and provided alternatives for the replacement of the structure. The firm also completed a hydraulic and hydrologic study, surveying the bridge site, delineating potentially affected wetlands, and coordinating with abutting and affected property owners and traffic management options during construction. The replacement structure is a 26-foot clear length, 7-foot 2-inch interior rise, precast concrete 3-sided rigid frame superstructure and wingwalls, supported on steel piles driven to ledge. The two-lane bridge includes bike lanes along both shoulders.

### Roadway and Drainage Evaluation

D&K regularly assists the Town with on-call evaluation and schematic level design of locally-funded road and drainage improvement projects.

### Dunklee Road Bridge

D&K evaluated a box culvert structure that was constructed in 2006 and failed in 2008 during a flood event; the rehabilitation project is under construction and received funding from the New Hampshire Municipal Bridge Aid Program.

### Water/Sewer Extension Feasibility Study (South)

D&K completed a potable water and sanitary sewer utility infrastructure feasibility study to from the existing southerly limits to the Hooksett town line.

### Water/Sewer Extension Feasibility Study (North)

D&K completed a potable water utility infrastructure feasibility study to from the existing northerly limits to the Concord town line.

# CHESTER, NH

84 Chester Street, Chester, New Hampshire 03036

Years Served: 1987–Present



<b>Planning Board Review</b>	D&K reviews private development subdivision and site plans for compliance with local, state, and federal regulations as well as scheduled and unscheduled construction observation for these projects.
<b>Town-Wide Road Evaluation</b>	D&K evaluated the Town's entire road system, including conducting several test pits, coordinating with a geotechnical subconsultant, and completing a pavement evaluation (cracks extent, types, location, settlement, rutting, etc.).
<b>Fremont Road</b>	D&K conducted a drainage project, including drainage calculations and stormwater drainage system design, erosion control measures, quantity take-offs, development of plans and specifications, and construction estimates.
<b>Webster Lane</b>	D&K completed a drainage study and provided pavement design of over ½ mile of road with recommendations for possible improvements. Services included drainage analysis, drafting, cost analysis, pavement design, and project management.
<b>Building Evaluations (Various)</b>	D&K performed building evaluations on Town offices, Old Town Hall, library, and elementary school. The services included civil/site, structural, mechanical, and electrical engineering to evaluate roof snow loads, HVAC issues, code issues, etc.
<b>Transfer Station</b>	D&K assisted the Town with sketch plans for a building addition to the transfer station and provided construction inspection services.
<b>Salt Shed</b>	D&K provided sketch plans for a new salt shed.
<b>East Derry and Harantis Lake Road Roadway and Drainage Improvements</b>	D&K completed a topographical survey, drainage evaluation, geotechnical investigation, and pavement design for a combination of a full-depth reconstruction and reclamation of East Derry Road and Harantis Lake Road from NH Route 102 to the Chester/Derry town-line; an approximate distance of 5,100 feet. The completed road section consists of two 11-foot paved travel lanes and two 3-foot gravel shoulders. Improvements included reclaiming the existing bituminous concrete road surface, replacement and new cross-culvert infrastructure (pipe, headwalls, flared-end sections), full-depth road reconstruction and binder course pavement (approximately 3,200 feet), reclaim and binder course pavement (approximately 1,900 feet), placement of gravel shoulder leveling material, combination of loam or riprap side slopes, and pavement markings. All work was completed in fall 2019, while the wearing course pavement was scheduled to be in summer 2020.

# RAYMOND, NH

4 Epping Street, Raymond, New Hampshire 03077

Years Served: 2014–present



## Planning Board Review

D&K reviews private development subdivision and site plans for compliance with local, state, and federal regulations as well as scheduled and unscheduled construction observation for these projects.

## Construction Observation

D&K provides construction observation services for roadway and other projects as requested. For roadway projects the scope of work often includes observing the Contractor's construction means and methods for roadway reclamation, overlay, milling, drainage improvements, signage installation, shop drawing review correspondence, and review of material sieve, proctor, and compaction test results.

## Pinard Waste

D&K provided review services for a new solid waste transfer facility.

## MS4

D&K is currently working with the Town to develop new regulations to assure compliance with MS4 permit requirements.

## Drainage Evaluations

D&K assisted the Town with the evaluation and culvert sizing for drainage improvements.

## Additional Relevant Experience

**Bunker Hill Road Bridge, New Hampshire Municipal Bridge Aid, Hill, NH.** DuBois & King is providing bridge study, design, and construction phase engineering for Bridge No. 140/099 on Bunker Hill Road. Services include alternatives evaluation and recommendations to rehabilitate the existing bridge, permit application assistance, preparation of final engineering plans and specifications, assisting the Town during the bid phase, and providing the Town with construction administration services.

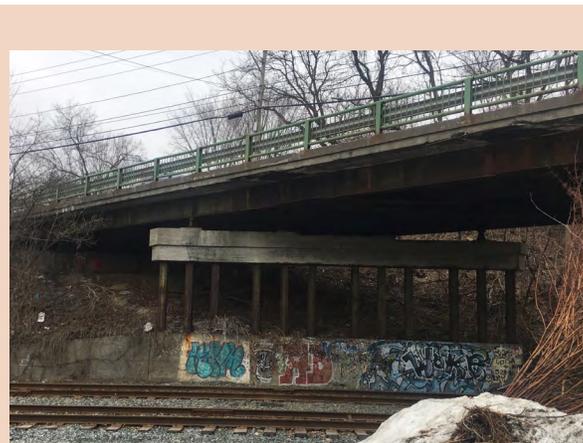


The Bunker Hill Road Bridge is a 21.5-ft-long precast concrete voided slab deck superstructure, on cast in place concrete abutments substructure with substandard approach guardrails, substandard bridge rail, and a Federal Sufficiency Rating of 23%. There is corrosion of prestressing strands in the precast deck, with several broken stands evident. This bridge is on the NHDOT Redlist and is currently closed and barricaded due to deficiencies noted.



D&K completed a detailed study that evaluated several cost-effective rehabilitation alternatives. The preferred alternative is to replace the deteriorated concrete deck span with a new precast concrete voided slab deck, new bridge and approach rails, and minor repairs to the concrete abutments. The Engineers Estimate for Construction is \$350,000.

**NH 12A (South Main Street) Bridge, Design and VE Study, Lebanon, NH.** DuBois & King studied existing conditions, reviewing work by another consultant and Value Engineering (VE) the design of a new bridge replacement. Three alternatives have been developed for replacement of Bridge 062/117 which carries NH 12A (S. Main Street) over the NH Railroad. Currently posted for 20 tons, the circa-1949 bridge is composed of a 145-ft-long, 27-ft-wide, 3-span steel stringer superstructure with a concrete deck. The substructure consists of pile-supported abutments and pile bents. D&K assessed existing conditions and previous alternatives/design, developed alternative concepts, and completed a report summarizing this information. The D&K bridge team is designing the preferred alternative which is a 63-foot-long steel stringer with concrete deck superstructure on skewed abutments. The Engineers Estimate for Construction for this value-engineered alternative is \$7,000,000, a reduction in cost from the original design concept of \$3,000,000. The project follows the NH Municipal Bridge Program process.



**Facility Condition Assessment, Department of Public Works, Laconia, NH.** D&K working with subconsultants Ward Geotechnical Consulting and Stewart Associate Architects evaluated the existing DPW facility conditions of the building. The existing concrete floor slabs were settling and causing noticeable deflection of movement throughout the building. D&K along with subconsultants provided geotechnical engineering and architectural services. The team completed a topographic survey of the building, conducted a boring program, performed a condition assessment of the concrete floor slabs, concrete/ pile foundation, steel building framing, and MEP systems, and provided cost estimating of repairs and rehabilitation of the current facility and for a new facility at an alternate site.



**Facility Analysis and Sustainment Asset Management Plan, New Hampshire Army National Guard, Statewide.** D&K served as team leader for assessment and report of 44 NH Army National Guard facilities. The project included architectural assessments, code compliance, MEP assessments, energy audits, and maintenance planning. Facility assessments include building interiors, exteriors, and roofs; verification of building layout to original drawings; code compliance; and site/civil features. Engineering assessments include review of existing drawings, visual inspection, equipment inventory, and recording of existing conditions. D&K completed a condition assessment of: mechanical-HVAC equipment, ventilation requirements based upon occupancy and usage, EMS/temperature control systems, plumbing fixtures and recommendations/ options for water conservation measures, lighting, and life safety and fire alarm. Inventory of equipment by manufacturer and part number, evaluation of equipment condition with recommendations and capital improvements, and estimates of probable costs for equipment upgrades or repairs. D&K completed a summary report of assessment, recommendations, and estimates.



## References

D&K currently serves as the on-call Engineer of Record for the following communities. Information on specific projects can be found in the experience section of this document.

### *Town of Chester, NH*

Andrew L. Hadik, Town Planner, Chester Planning Board  
AHadik@chesternh.org; 603.887.3636 Ext. 105 or Option 4

### *Town of Bow, NH*

Tim Sweeney, Director of Public Works  
tsweeney@bownh.gov; 603.738.3086

### *Town of Raymond, NH*

Christina McCarthy, Tax Collector/Planning Technician  
cmccarthy@raymondnh.gov; 603.895.7016

## Firm Performance

### Quality Assurance and Control

We understand that our clients rely on the accuracy and quality of the information contained within our engineering deliverables when formulating decisions. The information we provide in our services is the basis for decisions that have financial implications. Accurate information and high quality service is a central focus and integral component of D&K's quality assurance and quality control procedures.

Quality assurance includes standardized policies, procedures, and processes established to ensure that the development of a project and the services provided meet the project objectives and client goals. Quality control procedures include independent reviews to assure that industry standards are achieved. D&K's QA/QC procedures involve independent peer review of technical engineering deliverables at key milestones, including constructability reviews. D&K's Contract and

Project Managers have quality control responsibilities as part of every project management plan. Contract and project managers have the responsibility for assuring that quality control procedures are being followed and achieved.

Many senior firm leaders have more than 25 years of service with the firm. With this longevity of key staff, we have developed mature project management methods and communication protocols to effectively deliver services of an integrated project team. D&K's contract and project managers utilize established management systems and project scheduling and critical path software tools for the purposes of monitoring and managing project schedules and budgets, as outlined below:

- The firm utilizes engineering-based project accounting software to track project budgets. This budget management software is desktop available to D&K Project Managers.
- Project managers track weekly expenditures including staff time and direct expenses.
- Project managers participate in weekly workload coordination meetings. In these meetings, managers discuss the work effort that week, and the coordination and related issues. This is a forum to identify and resolve potential schedule conflicts.
- Contract and project managers are provided with weekly time and charge reports from the firm's accounting software. These reports provide project information, such as labor expended and expenses. This information is used to track project-expended labor against project-completed milestones, and this information is used to manage project schedules and budgets.

The best project management establishes clear project goals with defined schedule objectives and facilitates proactive communication between design team and other project parties. Shared goals and frequent communication of project status is the core of effective project management.

## Project Management Approach

A principal component of D&K's project management approach is proactive and regular communication, including frequent and timely communication with the Town. By listening and thoroughly understanding project objectives, D&K engineers strive to function as adjunct Town personnel. Constraints presented by budget, environmental issues, regulations, or the construction process itself can be successfully navigated by maintaining effective communication. Based on experience with similar projects, the following management approach has been successful in achieving project objectives:

**Management and Design Team.** Assign a capable project manager who will be the primary point of contact with the Town and who has the experience to keep the project on track. Assign a design team with the experience and expertise required to efficiently complete the project. D&K's Project Manager and the design team assigned to the project meet these criteria.

**Issue Identification and Resolution.** Identify, discuss, and resolve key design issues as early in the process as possible. These issues may include right of way, historical and environmental investigations, drainage, impacts to individual properties, utilities, existing vegetation, drive crossings/treatments, ADA compliance, crosswalks, signage, pavement markings, and safety. Early identification is critical for timely resolution.

**Communications.** Establish and maintain client involvement/communications through regularly scheduled meetings and submission of monthly progress reports throughout the duration of the project and phone/email communications as warranted. It is important to establish early and continuous communication with the various stakeholders, including the regulatory agencies that have jurisdiction over elements of the project, property owners, utilities, NHDOT, and the general public. Proactive discussion of this project with natural regulatory agencies will be important to the successful completion of this project.

## Claims and Litigation Statement

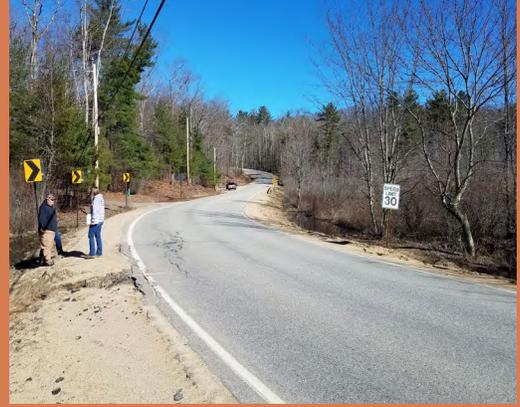
DuBois & King (D&K) has been in continual operation providing professional consulting services for 59 years. There has never been an action taken by a regulatory agency involving the firm with respect to work performed.

D&K, as with any firm that has been in business this long, has had disputes regarding services provided. Professional consulting, as with any business, has the potential for performance not aligned with expectations. Disagreements and problems may arise on projects. D&K takes a proactive approach and has been successful resolving disputes on projects before they escalate to the point of litigation. D&K has been providing town engineering services in New Hampshire for over 30 years.

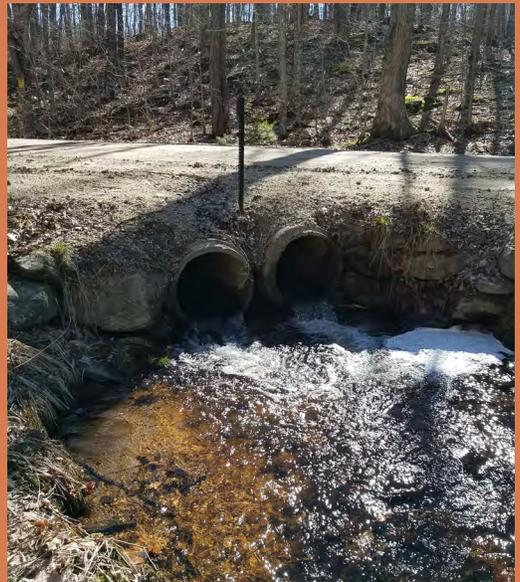
## Conflict of Interest Policy

DuBois & King is not currently involved with and, if selected by the Town, will not enter into a contract with, any project proponents, partners, or associates who seek to submit a site plan, subdivision plan, or development application to the Town.

DuBois & King further acknowledges that the firm is aware of no personal, business, contractual, or other engagements, arrangements, or other dealings with any Town officer, Town employee, or business entity with which a Town officer or Town employee is affiliated, currently or in the past.



In April 2019, D&K conducted a visual evaluation of a cross culvert under Pond Hill Road near Daniel Carter Road. Subsequently, we conducted a preliminary H&H evaluation of the Pond Hill Road culvert and the twin culvert crossing under Daniel Carter Road.





## Jeffrey Adler, PE

Project Manager/Senior Civil Engineer

### EDUCATION

M.S., Civil Engineering,  
University of Maine - Orono, 1982  
B.S., Civil Engineering,  
University of Maine - Orono, 1981

### REGISTRATIONS

Civil Engineering: NH 8410

Mr. Adler has 38 years of experience in civil and environmental engineering, providing professional services for municipal, state, and private clients. Jeff has served as Project Manager and Senior Engineer for state and municipal-level recreation, planning, and infrastructure improvement projects. Projects have included multidiscipline management including civil/site, structural, electrical, and HVAC improvements. Assignments have involved sidewalk, roadway and runway reconstruction and paving, lighting, permitting, water and wastewater, parking, drainage, and utilities.

**Town Engineer, Barrington, NH.** Project Manager for general engineering services and as the Engineer of Record for the Town of Barrington since 2011. Select relevant projects include:

- **Comprehensive Town-Wide Road Study.** Provided a comprehensive inspection and evaluation of roads Town-wide, totaling 80 miles. Inspected and evaluated pavement conditions, drainage, ditches, and guardrails. Developed a report summarizing/recommending short- and long-term capital improvements for the Town. Phase II includes in-depth evaluation and soil borings to determine priority list of actions and estimates of associated costs.
- **Mills Subdivision.** Provided road inspection and review for the Planning Board of drawings for 1,000-ft-long Mills Falls Road access leading into the Mills subdivision.

**Subdivision Plan Reviews, Town Engineer, Chester, NH.** Served as Town Engineer since 1987. Services included general engineering and review of subdivision and site plans submitted to Planning Board to ensure roadways, stormwater drainage and collection, erosion control, and sewerage disposal systems conform to Town and state regulations. Letter report is prepared for each project, including construction bond estimate. Construction inspection involves 5-step process to ensure roadway projects conform with plans and standard construction practices. Have reviewed and inspected over fifty development projects. General engineering projects include bridge replacement and roadway rehabilitation.

**Subdivision Plan Reviews, Town Engineer, Bow, NH.** Town Engineer for planning board and general engineering services since 2011.

**Town Engineer, Raymond, NH.** Town Engineer for planning board and general engineering services since 2014.

**Subdivision Plan Reviews, Town Engineer, South Hampton, NH.** Selected to perform Subdivision Plan Reviews for the Town of South Hampton. Responsibilities include review of subdivision and site plans submitted to Planning Board to ensure roadways, stormwater drainage and collection, erosion control, and sewerage disposal systems conform to Town and State regulations. Letter report is prepared for each project, including construction bond estimate.

**Town Engineer, Gilford, NH.** Town Engineer for planning board and general engineering services. The work includes design of solutions for municipal projects, the performance of independent reviews of private development for subdivisions and site plans, and the performance of construction observation services.

**Subdivision Plan Reviews, Webster, NH.** Construction inspection services also provided. Assisted Town in amending subdivision regulations.

**Multidisciplined Services IDC, Dept of Parks and Recreation, City of Manchester, NH.** Project Manager for task order assignments including detailed site analyses of park and school properties, recreation fields, drainage, parking, walkways, site amenities, traffic circulation, lighting, and irrigation. Evaluations and assessments, design, permitting, construction documents, bid phase assistance, construction monitoring and administration, and coordination with state agencies for multiple facilities. Projects have included infrastructure improvements of several parks, four schools, a ski area, and a cemetery.



## EDUCATION

B.S., Civil Engineering, Worcester Polytechnic Institute, 2007

## REGISTRATIONS

Professional Engineer: NH 14122, ME 15511

Mr. Tsantoulis is a Senior Civil Engineer with 13 years of experience supporting projects for state and federal governments and private sector clients. He has served on long-term overseas assignments in the Philippines and Afghanistan before returning to New England. His project experience includes design services for airfields, U.S. Army vehicle maintenance facilities, dam reconstruction, wastewater facility upgrades, utility upgrades, stream crossings, stormwater hydraulics and hydrology, fish passage, and mixed-use commercial developments.

**Planning Board Representative, Barrington, NH.** Served as the Town's Planning Board Representative since 2017. Responsibilities include review of subdivision and site plans submitted to the Planning Board to ensure roadways, intersections, traffic impact, stormwater runoff, utilities (water/sewer), geotechnical, and erosion control conform to Federal, State and Town zoning ordinance and development regulations.

**Planning Board Representative, Bow, NH.** Served as the Town's Planning Board Representative since 2017. Responsibilities include review of subdivision and site plans submitted to the Planning Board to ensure roadways, intersections, traffic impact, stormwater runoff, utilities (water/sewer), geotechnical, and erosion control conform to Federal, State and Town zoning ordinance and development regulations.

**Planning Board Representative, Raymond, NH.** Served as the Town's Planning Board Representative since 2017. Responsibilities include review of subdivision and site plans submitted to the Planning Board to ensure roadways, intersections, traffic impact, stormwater runoff, utilities (water/sewer), geotechnical, and erosion control conform to Federal, State and Town zoning ordinance and development regulations.

**Roadway and Utility Improvements, Lebanon, NH.** Served as Project Engineer for Contracts 10 and 11 sewer separation projects for the city. The projects included utility improvements, combined sewer separation, multimodal planning, roadway and sidewalk construction, storm drain outfall improvements and slope stabilization. Design included a hydrologic analysis and watershed delineation, as well as a hydraulic analysis for existing and proposed storm drain networks.

**Allen Street, Rangeley, ME.** Project Engineer for a project that includes drainage improvements along a 2,700 ft roadway corridor. Design included a hydrologic analysis/watershed delineation, as well as a hydraulic analysis for existing and proposed storm drain networks.

**NHDOT, Route 108 Reconstruction, Durham and Newmarket, NH.** Civil Engineer for the design of roadway improvements for a two-lane roadway with bicycle accommodation. Prepared preliminary design plans for roadway improvements and safety improvements along a 5.4-km corridor.

**Hawthorne Partners, Mixed-Use Residential and Commercial Center, Bedford, NH.** Civil Engineer for a mixed-use commercial and residential development. Amenities include a 7,525-SM assisted living facility, 4,645-SM of medical offices, and 1,765-SM of retail space. Performed site layout and design, sewer layout and profile design, and grading and drainage design. Performed stormwater modeling and sizing for the stormwater collection and treatment system.

**Bell-Heery Joint Venture, Federal Correctional Institution, Berlin, NH.** Civil Engineer for site/civil, drainage, utility, and roadway design services for the \$250M Federal Correctional Institution D/B project in Berlin. Designed the main access roadway, including horizontal alignment and vertical profile design, utility layout and coordination, grading and drainage design, and preparation of project specifications. Provided Construction Administration services.

**Lubberland Creek Culvert Replacement and Stream Restoration, Newmarket, NH.** Project Engineer for evaluation and permitting for the replacement of deteriorated CMP arch culvert for the town and the Nature Conservancy. The crossing assessment included tidal monitoring, as well as hydrologic and hydraulic modeling incorporating future sea-level rise projections. The design included stream simulation techniques for restoration of the natural stream channel and enhancement of aquatic organism passage.



**EDUCATION**

B.S., Civil Engineering, University of Massachusetts Amherst, 2003

**REGISTRATIONS**

Professional Engineer: NH 14114

**AFFILIATIONS**

City of Manchester Zoning Board of Adjustment, Vice Chairman (2015-Present)

Mr. Lovell has 17 years of civil engineering experience, including planning, design, and construction of water distribution and storage, wastewater collection, combined sewer overflow system improvement, stormwater management, roadway design, site design and natural gas distribution projects. José has been responsible for all aspects of project development, including conceptual, preliminary, and final design, construction cost estimating, various types of analyses and assessments of municipal and private water and wastewater infrastructure, development of contract drawings and specifications, permitting, property easement acquisition, construction administration and resident engineering, development of record drawings, and project startup and closeout services.

**Planning Board Representative, Raymond, NH.** Serves as the Town’s Planning Board Representative. Responsibilities include review of subdivision and site plans submitted to the Planning Board to ensure roadways, intersections, traffic impact, stormwater runoff, utilities (water/sewer), geotechnical, and erosion control conform to Federal, State and Town zoning ordinance and development regulations. Provided construction observation for the following projects:

- **Norris Farms Map 35/Lot 15**
- **Mega-X, LLC Map 22/Lot 9-1**
- **Daycare, Map 29-3/Lot 41**
- **BenAsh Holdings Map 23/Lot 52**
- **Kelleher Commercial Map 11/Lot 7**

**Planning Board Representative, Chester, NH.** Serves as the Town’s Planning Board Representative. Responsibilities include review of subdivision and site plans submitted to the Planning Board to ensure roadways, intersections, traffic impact, stormwater runoff, utilities (water/sewer), geotechnical, and erosion control conform to Federal, State and Town zoning ordinance and development regulations. Provided construction observation for the following projects:

- **Chester Mill Pine Village Subdivision**

**Wastewater Asset Management, Springfield Water and Sewer Commission (SWSC), Springfield, MA.** Performed oversight of a sewer CCTV/Cleaning subconsultant while gathering GIS location and condition data of sewer manholes for the Springfield Water and Sewer Commission’s Asset Management Program.

**Bicycle & Pedestrian Improvements, Bradford, NH.** Resident Engineer during the entire construction phase of approximately 1,700-LF of roadway, bike lane, curb and concrete sidewalk construction with associated underground drainage structures and piping on East Main Street in the Town’s center. The project followed the NH LPA process.

**300-Unit Multi-family Residential Re-development, Melrose, MA.** Civil/Site Engineer for an 8-acre, 300-unit, multi-family residential mill building rehabilitation. The project required extensive research into the existing underground utilities, including two MWRA sanitary sewer trunk mains, located along this historic industrial mill site from the 1800s. Researched and compiled existing conditions information from a limited ground survey, record plans from the City, the MWRA and Massachusetts Archives, and information retrieved from private utility companies. Assisted in the design of the closed drainage system. Coordinated with an architectural consultant while assisting with the design of the site layout around the buildings.

**Multi-family Residential Development, Stoughton, MA.** Civil/site Staff Engineer for a historic mill building site renovation. The project objective was to convert a 27-acre historic mill building site containing a stream into a 300-unit designated affordable multi-family housing (40B) development. Collaborated directly with the client while preparing several conceptual site designs, prepared construction cost estimates, assisted with watershed and drainage analyses, assisted with wastewater flow analyses and negotiations with the Town and Client regarding connection to municipal sewer and collaborated with the design team to prepare the drainage report per the MA Department of Environmental Protection (DEP) standards.



## Nicholas Sceggell, PE, LPA

Senior Civil Engineer

### EDUCATION

Bachelor of Civil Engineering (BCE),  
Environmental Concentration, The Catholic  
University of America, 2004

### REGISTRATIONS

Professional Engineer: NH 13870  
NH Local Public Agency Certification  
Training - Federal Aid: 1518

Mr. Sceggell has 16 years of experience working with municipal, nonprofit, and commercial clients on a diverse portfolio of design, construction management, and environmental planning projects. He has significant experience on civil/site and utility projects including drinking water, wastewater/sewer, and stormwater infrastructure. Nick has expertise with ArcGIS mapping software and GPS data collection; AutoCAD Civil3D to create alignments, profiles, vertical and horizontal curve design, and related site design techniques; WaterCAD to model water systems in order to evaluate capacity and development impacts; and HydroCAD for stormwater management calculations.

**Keating-Birchwood Area Reconstruction, Dover, NH.** Project Manager for design of 4,400 feet of utilities and road reconstruction in a residential area. Provided coordination of transportation design and survey, and lead design of water and sewer service, stormwater and drainage design, public outreach programs, and associated permitting. Design elements incorporated Complete Streets multimodal transportation design measures and the integration of Low Impact Design (LID) stormwater infiltration and treatment facilities.

**Marlboro Street Reconstruction, Keene, NH.** Project Manager for the design of 4,700 feet of utilities and road reconstruction in an urban commercial/residential area. Providing coordination of transportation design and survey, and leading design of water and sewer service, stormwater, and drainage design, public outreach programs, and associated permitting. Design elements incorporate Complete Streets multimodal transportation design measures.

**The Highlands at South Down Drainage Evaluation, Laconia, NH.** Project Manager to evaluate existing drainage infrastructure for a condominium association to determine if grass treatment swale is adequately sized and in accordance with Best Management Practices. Identified improvements necessary to meet original design intent.

**Site Plan Drainage Review, Gilford, NH.** Project Engineer for review of site plans for new construction of a private residence abutting the Client's property. Some drainage conflicts included location of pervious pavement surfaces over a wetland and likely within the expected high water table and lack of footing drains for planned private residence. The plans also indicated that stormwater runoff from the abutting property's driveway would be directed into the client's property, away from a wetland area, and runoff from the Town road would be altered as a result of the new driveway. Provided a letter report detailing stormwater management recommendations for existing plans and conditions.

**Lakes Business Park, Laconia, NH.** Project Manager for design and permitting in support of a trail network and a pedestrian bridge within a heavily vegetated section of an existing commercial area. Service includes attendance of meetings and site visits, and design services.

**Christmas Island Pump Station Evaluation, Laconia, NH.** Project Manager for evaluation of the existing pump station equipment capacity for a new development planned in the station's catchment area in a third party review for the City. Laconia had historical data on the weekly runtimes of the pumps that was used to develop the existing sewer flows into the station. Drawdown tests on the pumps were completed to determine pumping rates. The pumping rates were compared against predevelopment and postdevelopment design flows and the results reported to the City.

**Water System Reviews and Hydraulic Modeling, Laconia Water Works, Laconia, NH.** Consulting Engineer for new development projects and impacts to the City's water infrastructure. Work includes maintaining a hydraulic model of the water distribution system used to evaluate fire flows and pressures at new developments or extensions of the system. Responsible for consulting on issues that may arise within the system and provide design feedback on water main replacements.

**On-Call Sewer Review, Plymouth Village Water and Sewer District, Plymouth, NH.** Project Manager for third party review services to evaluate new wastewater connections to a municipal wastewater collection system. Services include review of design plans and calculations to support location and sizing of new water and sewer infrastructure, and review of design details and specifications for compliance with PVWSD standards.



**EDUCATION**

B.S. Environmental Engineering, Rensselaer Polytechnic Institute, 1992

M.S. Course, Advanced Hydrology, Kansas State University, 2001

M.S. Course, Physical and Chemical Hydrogeology, University of Massachusetts, Lowell, 1996

M.S. Courses, Wastewater Treatment and Engineering; Open Channel Hydraulics, University of New Haven, Connecticut, 1994-95

**REGISTRATIONS**

Professional Engineer: NH 9709, VT 7350, NY 79818

40-hour OSHA HAZWOPER Course

8-hour OSHA HAZWOPER Course

Firefighter I Certification

Mr. Ashley has 28 years of environmental and civil engineering experience. The manager of the firm's Brandon, Vermont office, and Director of the Public Works Division, his experience includes planning, management, and design of water and sewer projects, hazardous waste and brownfield remediation, road and slope projects, stormwater collection and treatment, and site/civil development projects for municipal, state, local and private clients. Jon has supported environmental documentation and permitting for infrastructure and site projects and maintains strong working relationships with regulatory officials.

**Wastewater Disposal Systems and Subdivision Plans Review, Town of Shelburne and the Cornwall Planning Commission, VT.** Reviewed dozens of engineering plans for proposed wastewater disposal systems and subdivisions for conformance with Town and State rules.

**Neshobe Planned Unit Development, Brandon, VT.** Project Manager for water, wastewater, road, sidewalk, and stormwater design services for a 150-unit Planned Unit Development with mixed residential, agricultural, educational, and community uses. Oversaw an update to the Fire District's WaterCAD model to plan the needed water upgrades to accommodate the development. Evaluated feasibility and costs of necessary upgrades to municipal water and wastewater systems to accommodate the PUD.

**Addison Wastewater System, Town of Addison, VT.** Conducted a comprehensive needs assessment and feasibility study for community wastewater options to serve existing properties in the Village District. Identified alternatives and provided cost estimates for clustered wastewater systems that could serve the public buildings in the village, in an area with generally difficult soil conditions. Assisted the Town with procuring architectural services to facilitate restoration of the historic Town Hall. Assisted the Town with CWSRF funding and conducted a preliminary engineering study of a performance-based mound and curtain drain for the most promising disposal site. Prepared an Environmental Report with a Finding of No Significant Impact (FONSI). Services have included final design and bid of an innovative collection system and a mound system with a disposal capacity of 4,300-gallons-per-day, and the project is currently advancing into construction in 2020.

**Wastewater and Water Feasibility Study, St. Albans, VT.** Project Manager for evaluation of options for the installation of new municipal water and sewer systems. Led development of a basemap by GPS-locating existing components and reviewing existing state permits; evaluated current and future water/sewer service needs; and researched options for the installation of water supply, water storage and distribution, wastewater collection, and indirect discharge wastewater treatment and disposal systems. Several locations of well-suited soils for wastewater disposal were identified. Test pits and a preliminary hydrogeologic evaluation of the preferred disposal site were completed to estimate the wastewater disposal site capacity. Preferred sites for potential drilled well locations were identified by GIS analysis of well yields and bedrock formations, and the feasibility of a new lake intake alternative was also evaluated for comparison.

**Bethel Mountain Road Slope Stabilization, Rochester, VT.** Project Director for evaluation, survey, permitting and final design for a 2,800-LF emergency roadway repair project. The project implements long-term repairs to sections of embankment that failed during a heavy spring rainfall and snowmelt event that closed the road, including upgraded drainage systems and structures, slope repair, and roadway reconstruction and minor realignment. Serving as a valuable mountain connector road between VT 100 and VT 12, rapid reopening and stabilization of the roadway was a critical need, which dictated a significantly compressed schedule. The project was managed by the Town of Rochester and receives FHWA-ER funding. Responsible for providing quality assurance review, firm resource scheduling and budgeting oversight, geotechnical subconsultant coordination, and client coordination.

**Plank Road Box Culvert, New Haven, VT.** Project Manager for design, permitting, bid, and construction of a concrete box culvert for a Class 2 road crossing of a river under a VTrans structures grant, including design elements for fish passage.



## James Hall, PE, LPA

Senior Bridge Engineer

### EDUCATION

B.S., Civil Engineering, University of Rhode Island, 2002

M.S., Structural Engineering, University of Massachusetts, 2007

### REGISTRATIONS

Professional Engineer NH: 13644; VT: 134249; ME: 15804

NHDOT LPA Certification: 1230

OSHA Confined Spaces

OSHA Fall Protection

Mr. Hall is a senior bridge engineer and the manager of D&K's bridge engineering group. He has 21 years of experience in inspection, evaluation, design, and construction observation of numerous transportation projects throughout New England. Beginning his career at RIDOT in 1999, Jim's expertise includes the design and rating of a wide range of steel, timber, and concrete bridges, including single and multi-span bridges. Jim has served numerous projects involving the analysis and rehabilitation of historic bridges, as well as developing accelerated bridge construction projects. His responsibilities include oversight of bridge engineering staff, creating and maintaining project budgets and schedules, and working closely with local, state, federal, and private clients and regulatory officials to support bridge inspection, rehabilitation, and replacement projects.

**NH 12A Bridge over NH Railroad, Lebanon, NH.** Project Manager for the evaluation of a consulting firm's design of a pre-cast concrete arch carrying NH Route 12A over a railroad. D&K's study concluded a smaller pre-cast concrete arch or a conventional steel stringer and concrete deck bridge, on alignment would result in significant construction cost savings to NHDOT and the City. This project receives funds from the NHDOT Municipal Off-system Bridge Replacement and Rehabilitation program.

**Dunklee Road Bridge Rehabilitation, Bow, NH.** Senior Bridge Engineer for study and design engineering for Bridge No. 182/113 on Dunklee Road over Bog Brook. D&K services include alternatives evaluation and recommendations to rehabilitate the existing bridge, preliminary permit application assistance, and cost estimating of the various alternatives considered. The bridge is a 20-foot precast concrete rigid frame structure that has inadequate scour protection and wingwall foundation support, and substandard retaining walls. The Federal Sufficiency Rating is 72.5%.

**Wallace Road Culvert Replacement, Bedford, NH.** Lead Bridge Engineer responsible for all phases of the design process, including steel and concrete design calculations, calculating quantity take-offs, specifications, estimates, drafting and reviewing plans. This project involved the rehabilitation of the badly deteriorated Wallace Road Bridge with a paved concrete invert. Engineering services included hydraulic analysis, environmental and historical permitting, roadway, and bridge design on an accelerated schedule.

**Multiple Bridge Replacements over US Route 1 Bypass, Portsmouth, NH.** Senior Project Engineer responsible for load rating, bridge design, and quality control of design documents. This project involved final design and construction services for bridge replacements over the US Route 1 Bypass in Portsmouth, NH. Five structurally deficient bridges (Maplewood Avenue, Stark Street, Woodbury Avenue, Islington Street, and Middle Road) over the US Route 1 Bypass were replaced. Along with the structural work, associated highway work included approach roadway reconfiguration and developing traffic detours for each bridge closure.

**Sewalls Falls Bridge Replacement, Concord, NH.** Senior Bridge Engineer responsible for structural design and plan development. This municipally-managed bridge project involved the replacement of the Sewalls Falls Bridge and approach roadway. The existing two-span 100-year-old bridge truss was replaced by a three-span, steel girder bridge supported by drilled-shaft river piers. This project included environmental resource identification, survey, hydraulic design, geotechnical investigation, right-of-way, utility coordination (including hanging a waterline), roadway design, and construction phase services, and public outreach including a project website and a series of listening sessions throughout the project.

**Bunker Hill Road Bridge, Tamworth, NH.** Senior Bridge Engineer for an in-kind replacement of a municipally-owned single-lane bridge that carries Bunker Hill Road over Mill Brook. In responsible charge of design.

**South Main Street Sidewalks and Bridges Project-TAP, Brookline, NH.** Project Manager for the development of sidewalks, pedestrian crossings, and pedestrian bridges along South Main Street and Mason Road. The project includes installation of approximately 2,300 linear feet of new sidewalk, and two pedestrian bridges. Transportation Alternatives Program (TAP) funding for the project is administered through the New Hampshire Local Public Agency (LPA) program. Services include guiding the Town through the LPA process by providing survey, design, NEPA documentation and permitting assistance, wetland delineation, public engagement, traffic analyses, and construction administration and observation.



**Timothy Dall, PE, SE, LEED AP, SECB**

Senior Structural Engineer

## EDUCATION

B.S., Civil Engineering, University of Vermont, 1997

Studies toward M.S., Civil Engineering, University of Vermont

## REGISTRATIONS

Professional Engineer: NH 12905; VT 8096; NY 098310; NJ 24GE05172200; MA 55891 (Structural)

Structural Engineer: IL 81007009

LEED Accredited Professional

NCEES: 29972

NCEES: Model Law Structural Engineer

OSHA 10-Hour Training Course

Permit-Required Confined Space

Mr. Dall is a licensed professional engineer with 24 years of experience as a structural engineer. He leads the DuBois & King Structures Division. Tim's experience includes design and investigation of various building materials, including steel, concrete, precast concrete plank, masonry, and timber. His project experience includes new building construction, retrofit of existing buildings, pedestrian bridges, and other structures of various materials and degrees of complexity. He is responsible for project management, structural design, and production of contract documents using CADD and Building Information Modeling (BIM) platforms.

**Facility Condition Assessment, Department of Public Works, Laconia, NH.** Engineer of Record for the evaluation of the existing DPW facility conditions of the building. The existing concrete floor slabs were settling and causing noticeable deflection of movement throughout the building. The scope of services included a topographic survey of the building, conduction a boring program, completion of a condition assessment of the concrete floor slabs, concrete/pile foundation, steel building framing, and MEP systems, and cost estimating of repairs and rehabilitation of the current facility and for a new facility at an alternate site.

**Structural Facility Services, Town of Bow, NH.** Senior Structural Engineer on behalf of the Town to review information from a commercial property owner to confirm that the owner's engineers met the professional standard of care for an evaluation of a building damaged by fire. Responsible for client communication, interpreting engineer's reports and calculations for the Town, and document review.

**Cochecho Street Wastewater Pump Station, Dover, NH.** Structural Engineer for the reconstruction of a 40,000–60,000 GPD pump station, including the pump, controls, appurtenant site improvements, standby generator, and evaluation/mitigation of hazardous materials including petroleum present at the site. Responsible for building design.

**Town Office Building Addition, Essex, VT.** Senior Structural Engineer for a \$1.7M addition to an existing municipal office building. Improvements include a two-story wood addition, new records vault, and a single story entry vestibule. Scope of work included preliminary through final mechanical-HVAC and electrical design as well as structural foundation and framing design using Revit for collaboration between engineering disciplines and the Architect.

**Town Garage, Chelsea, VT.** Senior Structural Engineer for study through construction phase engineering services for a \$900,000 town garage. The Town had outgrown the existing 20-year-old facility and after a 4-year planning process, elected to fund the construction and design of a new site and structure in western Chelsea. Firm services included geotechnical design; coordination with an architect, the Town, and boring contractor; and design of mezzanine and site foundation for a 7,000 SF preengineered steel structure, warm air furnace, and propane fired heaters, lighting, and emergency generator for a fire pump.

**Windsor County Municipal Building, Windsor County, Woodstock, VT.** Project Manager/Engineer of Record responsible for the investigation, report and design of remedial measures at the existing Windsor County Municipal Building. Investigation and report prepared for owner's long-term capital improvement planning. Second floor structure reinforced to provide additional file storage capacity to accommodate Court consolidation.

**Williston Fire Facility, Williston, VT.** Engineer of Record for new 22,000-sf station constructed of wood framing and load bearing masonry walls with steel joints. The building was seismically classified as an essential facility with a seismic design category of D. The lateral system made use of wood and masonry shear walls.

**Steam Conversion Project, Concord, NH.** Structural Engineer for the modifications of 17 State of NH facilities in Concord from district steam to various types of local heating systems. The project has included civil, structural, and MEP design for multiple facilities, including the new central steam boiler facility serving the State House, State House Annex and State Library. The structural design elements for a new 38' by 52' single story concrete masonry unit (CMU) building that houses two steam generators serving the NHDAS campus included pile foundations, concrete masonry unit walls, and steel framed roof construction.



## Alan Gould, PE

Senior Electrical Engineer

### EDUCATION

B.S., Electrical Engineering, University of Vermont, 1989

### REGISTRATIONS

Professional Engineer: NH 14844; VT 100299

Mr. Gould is the Director of the D&K's Building Services Department and manages Pearson & Associates, a division of D&K. Alan has 30 years of electrical engineering experience performing and supervising the design of electrical systems for a variety of applications, including commercial, industrial and institutional clients. He owned and operated a mid-sized electrical contracting firm for ten years, managing up to 20 employees. Alan has performed LEED design from Silver through Platinum along with dozens of PV solar designs from 5kVA to 2 MW throughout Vermont, New York, and Massachusetts. His experience includes commercial electrical design and installation, utility infrastructure design and installation, residential, healthcare, institutional, and industrial electrical installations.

**Assessment, Soldiers Memorial Building, Lebanon, NH.** Senior Electrical Engineer responsible for performing an electrical systems assessment with a report identifying the code required upgrades and recommended electrical upgrades with estimated costs.

**Municipal Facility Assessments, Various Locations.** Senior Electrical engineer responsible for assessing facilities in : (8) Addison, VT, school buildings; Danville, VT, Middle and High School; (7) Lebanon, NH, municipal buildings including library, recreation center, and airport terminal; Hardwick, VT, Historic Judevine Library.

**New Town Office, Georgia, VT.** Electrical Engineer and Design Project Manager responsible for electrical schematic design concepts for cost estimating to allow the town to obtain a bond for this \$2M building project.

**New Town Office, St. Albans Town, VT.** Senior Electrical Engineer and Design Project Manager for a new \$3M facility. Provided electrical schematic design concepts for cost estimating and to allow the town to obtain a bond.

**Kellogg-Hubbard Municipal Library, Montpelier, VT.** Complete Electrical renovation of the historic library. Served as the project manager and electrical engineer for the project which included new lighting, new power and distribution to replace the existing systems. The project also included new security systems, fire alarm, and telecommunications.

**Middlebury Superior Courthouse Fire Alarm, Middlebury, VT.** Served as Project Manager and designer for a significant renovation and replacement of the fire alarm system throughout the historic 3-level courthouse. Responsible for design and management of the consultant team through the construction phase.

**Costello Courthouse, Cherry Street, Burlington, VT.** Served as Project Manager for a new back-up power generator to power the entire building, parking garage lighting renovations, and various security systems renovations.

**Historic Theater Assessment and Renovation, Woodstock, VT.** Senior Electrical Engineer responsible for providing a building-wide electrical systems assessment with a report identifying the code required upgrades and recommended electrical upgrades with estimated costs.

**Town Hall, Akeley Memorial Building, Stowe, VT.** Senior Electrical Engineer for various renovations, including new elevator and vault, heating and cooling system, as well as lighting revisions and upgrades for the facility.

**New Construction, Police and Rescue Facility, Stowe, VT.** Senior Electrical Engineer for a new public safety facility.

**New Construction, Stowe Ice Arena, Stowe, VT.** Senior Electrical Engineer for a new indoor ice arena that is also used as an indoor performance center.

**MEP Retainer Contract, VTrans, Statewide, VT.** Lead electrical engineer for ongoing renovations to the existing VTrans garages facilities across the state.

**MEP Retainer Contract for USPS, Northeastern Area.** Lead Electrical Engineer for ongoing and projects and renovations to existing US Post Office distribution centers and postal office buildings.



## EDUCATION

M.S., Mechanical Engineering, Rensselaer Polytechnic Institute, 1995  
B.S., Mechanical Engineering, University of Vermont, 1982

## REGISTRATIONS

Professional Engineer: NH 16216; VT 7355; CT 16137  
NCEES: 18-348-64

Mr. Dumas is a mechanical engineer with 38 years of experience in project management, design, and construction administration for projects ranging from conceptual design studies and facilities evaluations, to complex multidisciplinary design packages for multimillion-dollar projects. He has been directly involved in all areas of project administration. Steve provides commissioning services for a wide variety of facilities focusing on HVAC and specialty ventilation systems and beginning with Owner Project Requirements development and through post occupancy operational verification.

He is experienced with life cycle cost and ROI analysis, energy conservation evaluations, and system controls designed to provide energy saving operations for both existing and new systems. Steve has provided services for institutional, industrial, government, commercial, and healthcare sectors.

**Lebanon Police Department, Lebanon, NH.** Project Manager to investigate HVAC systems serving the Police Department. The project included a summary of the condition of existing HVAC systems, a description of system deficiencies, an evaluation of options to upgrade and improve the equipment, an evaluation of energy conservation measures (ECMs) that will improve system operation and reduce building energy use, estimated energy savings by each ECM, and an opinion of probable construction costs for budgeting purposes to implement these measures.

**Facility Analysis and Sustainment Plan for New Hampshire Army National Guard Facilities, Statewide, NH.** Senior Mechanical Engineer for a project to assess and develop capital improvement plan and energy audit recommendations for 44 NHARNG facilities, including electrical, mechanical, energy audits/building energy analysis, site assessments, and condition of building systems. Responsibilities included a functional verification of mechanical systems and controls at the NHARNG Center Strafford facility.

**Essex Town Hall, Essex, VT.** Senior Mechanical Engineer for boiler improvements.

**Chiller Noise Reduction, Stratton Mountain, VT.** Project Manager/Mechanical Engineer for assessment and remediation of chiller noise impacting adjacent condominium living areas.

**Mechanical Engineering Services, Statewide Term Agreement, New Hampshire Department of Public Works Design and Construction.** Mechanical Services Manager working with the Department of Public Works to address mechanical, electrical, and associated structural engineering issues for HVAC for State facilities. Projects include:

- **Glenciff Home Steam and System Upgrade, Benton.** Senior Mechanical Engineer for services to this off-grid facility. Mechanical services for this facility include steam and condensate system improvements to fully utilize a new steam plant.
- **Steam Conversion Project, Concord.** QA/QC/Mechanical Engineer for the conversion of 17 state-owned buildings from district steam to stand-alone heating systems. Provided management, and senior-level engineering to address the closing of the central steam plant within the City of Concord. This fast tracked project that used variable delivery methodology.
- **NHARNG AASF Energy Enhancement Design, Concord.** Design Director/Engineer of Record for facility-wide DDC system upgrade and energy conservation measures within the Army Aviation Support Facility in Concord. Work includes overall system assessment, migration of existing control system, and functional testing of all control points and hardware.
- **NHARNG AASF Energy Enhancement Commissioning, Concord.** Retro-Commissioning Agent for the 97,000GSF facility-wide mechanical-HVAC enhancement project. Engineering services address mechanical system and DDC functional testing, operational deficiencies, and HVAC system modifications and upgrades. Scope includes finalizing the integration of the new DDC system and correcting HVAC system settings and control sequence of operations.
- **Data Center Upgrades, Traffic Management Center, Concord.** Senior Mechanical Engineer for a new computer room air conditioning and enhanced power requirements for the primary data center that serves the Traffic Management Center and 911 Facility. The new system was sized for current and future expansion of the server equipment requirements (air conditioning, power, and emergency services). The new stand-alone computer room A/C system utilizes a glycol cooling loop through an exterior dry cooler to also provides "free cooling" during colder outside ambient temperatures. The project reconfigured two existing central station units to provide back-up air conditioning for the new system.



## Charlotte Brodie, CWS

Wetlands Scientist

### EDUCATION

M.S., Botany, Field Naturalist Program,  
University of Vermont, 1988

B.S., Biology, Smith College, 1978

### REGISTRATIONS

Certified Wetland Scientist: NH 244

Ms. Brodie is an interdisciplinary field scientist trained in environmental evaluation, interpretation, and monitoring. As a naturalist, she integrates information on the biotic and abiotic components of ecosystems for site descriptions, inventories, criterion-based evaluations, and impact evaluations. Her training and experience incorporate geology and geomorphology, soils chemistry, botany, vertebrate and invertebrate zoology, and hydrology. She specializes in wetlands analysis and has a thorough knowledge of state and federal regulations pertaining to wetlands and other waters of the United States. The quality of her work has been recognized by the US Environmental Protection Agency, which requested her services for a northwestern Vermont project aimed at early identification and protection of wetlands in areas subject to heavy development pressure.

**Town-wide Wetland Function Evaluation and Mapping, Raymond, NH.** Wetland Scientist responsible for leading a project to evaluate known wetlands and, using NH NWI+ and NRCS data and field observations, locate additional wetlands and identify the wetlands' functions with regard to groundwater quality. Completed a report and GIS assets to enhance the town's ability to develop zoning regulations that promote groundwater quality.

**Grist Mill and CEDA Industrial Parks Infrastructure Projects, Charlestown, NH.** Delineated wetland and obtained NH wetlands permit for work associated with an upgrade to a subdivision access road.

**Wetlands Services, Nashua Municipal Airport, NH.** Delineation and evaluation of wetlands adjacent to existing runway and in the vicinity of proposed expansion. Provided an assessment of wildlife habitat.

**Natural Resource Inventory of Goose Pond Forest & Stearns Hill, Keene, NH.** Natural resources inventory of 1,182 acres of City parkland including wetlands; vegetative communities/cover types; rare, threatened, and endangered species; natural communities of concern; wildlife; wildlife habitat; surficial and bedrock geology; and waterbodies.

**Bridge Rehabilitation, Main Street Bridge, Laconia, NH.** Wetlands Scientist for the evaluation and design of the rehabilitation of three distinct bridge structures which function as one bridge crossing the Winnepesaukee River. Project components included a field inspection of the bridge and surrounding area, an evaluation of existing conditions, and development of alternatives to repair or replace the existing structure. Responsible to provide wetland permitting assistance, rare, threatened and endangered species research and support for the NH DES Wetlands permit. This project was designated as the overall winner of the annual ACEC-NH Engineering Excellence competition.

**East Side Road Stream Crossings and Road Relocation, Trout Unlimited, Lincoln, NH.** Wetland Scientist responsible to support permitting for development of AOP-friendly stream crossings and relocation of east side road. Provided wetland delineation and evaluation.

**New Hampshire Fish & Game Department.** Wetlands Delineation for various recreational sites throughout New Hampshire, including projects in Litchfield, New Hampton, Kingston, Gilford, Hooksett, and Chapman's Landing.

**Morton Buildings, Inc., Auburn, NH.** Delineation and evaluation of wetlands on development site. Recommendations regarding erosion control and other measures to protect wetland.

**Town Center Roundabout, Bow, NH.** Wetland Scientist supporting natural resource evaluation for a study that developed alternatives to address a congested, centrally located intersection. Wetland delineation and evaluation.

**Evans Road Bridge, Town of Wentworth, NH.** Wetland Scientist for the replacement of a steel stringer bridge supported on one stone and one concrete abutment. Completed and submitted NHDES Wetlands permit, provided wetland delineation and evaluation.